REMARKS

This is a full and complete response to the Office action of August 20, 2012 (hereinafter "Office action"). Favorable reconsideration of the claims is respectfully requested in light of the following and the attached.

REGARDING THE CLAIMS:

Claims 21, 28, 30, 36, and 53-55 as set forth in the foregoing Listing of the Claims are herewith presented for further prosecution in this case. As indicated therein, Claims 17-18, 21-23, 28-31, 34-42 and 46-52 have been canceled, Claim 28 has been amended, and Claims 53-55 have been added, relative to the previous version presented on April 25, 2011.

Accordingly, applicants' have further specified the compounds represented by formula I in Claim 28, and have canceled redundant claims and claims previously withdrawn from consideration. Additionally, new Claims 53-55 have been added to further bring out some of the subsidiary embodiments of the claimed compounds. No new matter has been added. Favorable action is respectfully solicited.

REGARDING THE REJECTIONS:

Claims 21, 28-30, 35-37, 47-48 and 50-51 were rejected (*a*) under 35 U.S.C. §103(a) as being unpatentable over WO 96/26206 to von Deyn et al. ("von Deyn PCT") which corresponds to US 5,846,907 ("von Deyn US") (collectively referred to as "von Deyn") in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51) ("Silverman"), and were rejected (*b*) under the doctrine of obviousness-type double patenting over claims 1-8 of von Deyn US taken in view of Silverman. Favorable reconsideration of the claims is respectfully requested in light of the following remarks and the attached Declaration of Dr. Witschel dated February 21, 2013 ("Witschel Declaration IV").

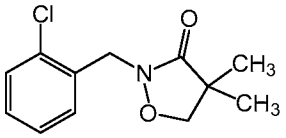
Regarding the Comparative Data:

The Office action reiterated the previous rejections criticizing that applicants' comparative data failed to show that the improvements achieved by applicants' compounds were, in fact,

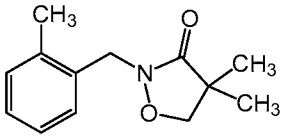
unexpected and unobvious, and were both of statistical and practical significance. Office action, p. 5, ll. 21-26; p. 7, ll. 6-8.

a) Applicants have shown that the results were unexpected and unobvious.

Applicants' compounds differ from the structurally closest prior art compounds disclosed by von Deyn in that a chlorine substituent is replaced by a methyl substituent. *Cf.*, *e.g.*, Office action, p. 3, ll. 11-13. However, replacing a chlorine substituent by a methyl group in a herbicidal compound is generally expected in the art to diminish the herbicidal efficacy of the compound. *See*, Dr. Witschel's Declaration of December 14, 2011, and filed January 3, 2012 ("Witschel Declaration III"), para. bridging pp. 5-6; Witschel Declaration IV, ¶6.a). The impact of such a replacement on the herbicidal efficacy is illustrated, *e.g.*, by data disclosed in US 4,405,357 to Change ("Change") which were highlighted in the copy of Change submitted with Witschel Declaration III. Change discloses herbicidal 3-isoxazolidinones including the following two illustrative compounds:



Example 16



Example 19

Change, cols. 11-12, ll. 56-12 and col. 12, ll. 44-58. The herbicidal efficacy data for the compounds are compiled in Table 1 of the reference, and some of the 'percent kill' (K) data shown in the table are reproduced below for convenience:

Appln. Rate	**2.000 kg/ha**		**4.000 kg/ha**	
	Example 16 (Cl)	*Example 19 (CH_3)*	**Example 16 (Cl)**	*Example 19 (CH_3)*
Lima Bean	**0**	*0*	**60**	*0*
Wild Oat	**100**	*0*	**100**	*0*
Barnyardgrass	**100**	*0*	**100**	*0*
Green Foxtain	**100**	*0*	**100**	*0*
Velvetleaf	**100**	*0*	**100**	*0*
Tomato	**100**	*0*	**100**	*95*
Field Bindweed	**100**	*0*	**100**	*0*
Soybean	**0**	*0*	**0**	*0*
Wild Mustard	**100**	*0*	**100**	*0*
Johnsongrass	**100**	*0*	**100**	*0*

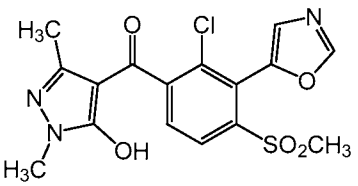
Appln. Rate	2.000 kg/ha		4.000 kg/ha	
	Example 16 (Cl)	*Example 19 (CH_3)*	**Example 16 (Cl)**	*Example 19 (CH_3)*
Cocklebur	**100**	*0*	**100**	*20*
Morningglory	**90**	*70*	**100**	*100*

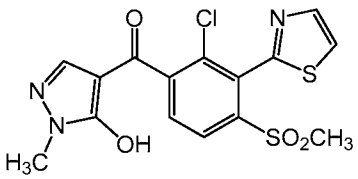
These data show that the methyl substituted compound, Example 19, is generally significantly less effective against unwanted plants than the chlorine substituted counterpart, Example 16. It can also be seen that the advantages of the chlorine substituted compound, Example 16, over the methyl substituted compound, Example 19, are more pronounced at the lower application rates.

In accordance with the explanations given by Silverman, the effect of the exchange of a chloro substituent by a methyl substituent on the efficacy of the herbicide may be due to any one or more of the change in structure, receptor interaction, pharmacokinetics and metabolism. Witschel Declaration IV, ¶6. For example, chlorine and methyl substituents are known to differ significantly in their inductive effects as well as the molecular volume and the polarity. Witschel Declaration IV, ¶6.b). Additionally, chlorine substituted compounds are likely to be metabolized differently than methyl substituted compounds because methyl groups frequently are rapidly oxidized in the plant which could be responsible for the lower herbicidal efficacy of methyl substituted herbicides as compared to their chlorine substituted counterparts. Witschel Declaration IV, ¶6.c). Further, replacing chlorine by methyl changes characteristics such as lipophilicity and pK_a of the compound which, in turn, affect the pharmacokinetics. Witschel Declaration IV, ¶6.d).

The Office action asserts that one of ordinary skill in the art would expect that replacing the chlorine group of von Deyn's compounds 5.4 and 5.5 by a methyl group would maintain the activity taught by von Deyn. Office action, page 8, ll. 2-4. However, the foregoing shows that, in the herbicidal art, the structural similarities between a chlorine substituted herbicide and its methyl substituted counterpart does *not* raise an expectation that both herbicides will exhibit the same degree of herbicidal efficacy. Rather, it is generally expected that the methyl substituted compound will exhibit the herbicidal action to a lesser degree than the chlorine substituted counterpart. It is also generally expected that phytotoxic effects on crop plants follow the trends of the herbicidal activity, *i.e.*, the herbicide which is more effective against unwanted plants likely also is more phytotoxic to the crop plants and *vice versa*. The consonance of herbicidal

efficacy and phytotoxic effects on crop plants is seen, for example, in the data disclosed in the use examples of von Deyn some of which are reproduced below. Von Deyn US, col. 24, ll. 1-41.





Ex. No.	1.28		1.98	
Appln. Rate [kg/ha]	0.125	0.0625	0.125	0.0625
Test Plant:				
ZEAMX	10	0	15	10
CHEAL	95	95	98	98
SINAL	90	90	100	95

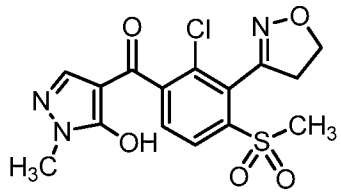
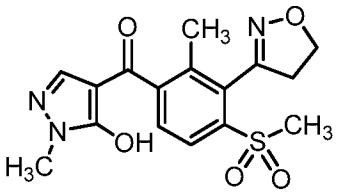
The data show that the oxazolyl substituted compound of Example 1.28 is less effective in the control of CHEAL and SINAL than the thiazolyl substituted compounds of Example 1.98. At the same time, Example 1.28 is less phytotoxic to ZEAMX than Example 1.98.

One of ordinary skill in the herbicidal art, therefore, expected that that applicants' methyl-substituted compounds would be less effective in controlling unwanted plants than the chorine substituted counterparts which are disclosed by von Deyn. One having ordinary skill also expected that the methyl-substituted compounds in accordance with applicants' claims would be less phytotoxic to crop plants. Contrary to these expectations, applicants' compounds exhibit better herbicidal action than the chlorine substituted prior art compound. Also contrary to these expectations, the improved herbicidal efficacy of applicants' compounds is *not* associated with a corresponding increase in phytotoxic effects on crop plants. Accordingly, applicants' finding that the compounds in accordance with applicants' claims are more active against unwanted plants than the chlorine-substituted counterpart disclosed by von Deyn, *without* at the same time being more phytotoxic to crop plants is unexpected. Witschel Declaration IV, ¶7. Accordingly, since the properties of applicants' compounds were unexpected, the compounds as a whole cannot be said to have been obvious. *See In re Papesch*, 315 F.2d 381, 391 (CCPA 1963) ("From the standpoint of patent law, a compound and all of its properties are inseparable; they are one and the same thing."); *In re Antonie*, 559 F.2d 618, 620 (Fed. Cir. 1988) ("Just as we look to a chemical and its properties when we examine the obviousness of a composition of matter claim,

it is this invention *as a whole*, and not some part of it, which must be obvious under 35 U.S.C. 103.") (emphasis original).

b) Applicants have shown that the results are of both statistical and practical significance.

Dr. Witschel has conducted a statistical analysis of data obtained in side-by-side comparisons of a the following compounds **5.5*** (comparative) and **3.86** against three key corn-weeds *Brachiaria plantaginea* ("BRAPL"), *Amaranthus retroflexus* ("AMARE"), and *Abutilon theophrasti* ("ABUTH") as well as the crop plant corn ("ZEAMX) in post-emergence treatment, and has evaluated the statistical relevance of the test results.

	
5.5* (comparative)	**3.86**
Compound 5.5 von Deyn US, col. 29, Table 5	Compound 3.86 Ser. No. 09/091,300, Table 3, p. 133

Witschel Declaration IV, ¶¶2.b), 4. to 5. The statistical analysis confirms the trends already apparent in the data previously presented: the probability that the comparative compound 5.5* is as active as applicants' compound 3.86 against the weeds BRAPL and ABUTH is below 0.1%, and the probability that the comparative compound 5.5* is as active as applicants' compound 3.86 against AMARE is below 3%. Witschel Declaration IV, ¶5.a). Conversely, the probability that applicants' compound 3.86 is as phytotoxic to ZEAMX as comparative compound 5.5* is about 17%. Witschel Declaration IV, ¶5, Table 1b. Accordingly, the improved herbicidal efficacy of applicants' compounds, as well as the improved selectivity thereof, is of statistical significance.

The improvement in herbicidal efficacy and selectivity of applicants' compounds, also, translates to significant practical advantages: The increased herbicidal efficacy means that a better control of the unwanted plants is achieved while using lower amounts of the chemicals. Especially the superior control of Amaranth which is achieved by applicants' compounds, as compared to the compounds of von Deyn, is highly relevant since an increasing number of Amaranth species, such as Palmer Amaranth, are tolerant against the herbicide glyphosate

(Roundup®) and other key herbicides which are commonly employed, e.g., in corn in the U.S. The acreage which is infested by such herbicide tolerant Amaranth species continues to grow, thus posing a significant threat to the US agriculture. Witschel Declaration III, p. 14, 1st para. Additionally, the increased selectivity of applicants' compounds means that, in spite of the improved herbicidal efficacy, the damage caused by the compounds to crop plant is less severe. This reduces or even eliminates the need to employ applicants' compounds in combination with a safener, thus, easing the burden on the environment. Additionally, the broader spectrum of activity, i.e., the control of both grasses and broad-leafed weeds, together with high selectivity to corn, reduces or even eliminates the need to employ applicants' compounds in combination with other herbicides compared to the prior art compounds and the market standards, and thus further eases the burden on the environment. Witschel Declaration III, p. 14, 2nd para.; Witschel Declaration IV, ¶7).

Regarding the Disclosure of von Deyn:

The Office action asserts that claim 4 of von Deyn US is drawn to a small genus of compounds where the M group includes alternatives of chlorine and methyl, and that a combination of claim 4 with Table 5 directs one of ordinary skill to a small subgenus encompassing applicants' compounds. Office action, p. 7, ll. 11-16. Further, referring to the use examples of von Deyn, the Office action asserts that one of ordinary skill in the art would expect such a result in the compounds of the instant claims. Office action, pp. 5-6, ll. 26-2.

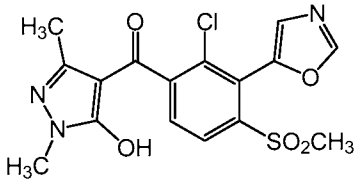
a) Claim 4 of von Deyn US does not delineate or suggest a small genus of compounds.

Claim 4 depends on claim 1 of von Deyn US and specifies L and M as being "hydrogen, methyl, methoxy, methylthio, chlorine, cyano, methylsulfonyl, nitro, or trifluoromethyl." Von Deyn US, col. 31, ll. 20-22. In combination with claim 1 of von Deyn US, this means that the position of L and M on the benzoyl radical is unspecified, *i.e.*, L and M can take any 2 out of 4 vacant positions of the benzoyl ring and L and M can be identical or different. Additionally, the meaning of Z ("a 5- or 6-membered heterocyclic saturated or unsaturated radical which has one to three hetero atoms selected from the group consisting of oxygen, sulfur and nitrogen and which is unsubstituted or substituted by …", *id.*, col. 30, ll. 1-21), and the meaning of Q (*id.*, col. 30, ll. 31-51) is not further specified by claim 4.

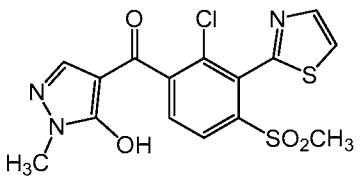
Additionally, it is not apparent why one having ordinary skill in the art who was not imbued with the knowledge of applicants' invention would have been motivated (*a*) to combine the subgenus of claim 4 *exclusively* with the 10 compounds enumerated in Table 5 of von Deyn US while *disregarding* the 188 examples of particularly preferred compounds which are enumerated in Table 1 of von Deyn US, (*b*) to focus on a replacement of the substituent M rather than the substituent L or, for that matter, Z, or (*c*) to focus on the 4,5-dihydroisoxazo-3-yl substituted compounds 5.4 and 5.5 rather than one of the (is)oxazolyl, thioxazolyl, or thienyl derivatives also enumerated in Table 5, or one of the further derivatives which are listed in Table 1 and in which Z represents a 5- or 6-membered aromatic ring. It is impermissible within the framework of Section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. *In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965).

b) The use examples of von Deyn fail to suggest the particular and advantageous property profile of applicants' compounds.

As addressed hereinabove, the use examples of con Deyn illustrate herbicidal properties of Examples Nos. 1.28 and 1.98:



Ex. No. 1.28



Ex. No. 1.98

Von Deyn US, col. 24, ll. 1-41. A person of ordinary skill in the herbicidal art who evaluated these use examples, and the respective data set forth in Tables 2 and 3, in the context of von Deyn's teaching readily appreciated that these compounds:

(*a*) Carry a chlorine substituent in the position of M; and

(*b*) Carry an oxazolyl or thiazolyl ring, *i.e.*, an aromatic ring, in the position of Z.

Again, in the herbicidal art, the structural similarities between a chlorine substituted herbicide and its methyl substituted counterpart does not raise an expectation that both herbicides will exhibit the same degree of herbicidal efficacy. Rather, it is generally expected that the methyl substituted compound will exhibit the herbicidal action to a lesser degree than the chlorine

substituted counterpart. *Cf.*, Witschel Declaration III, para. bridging pp. 5-6; Witschel Declaration IV, ¶6.a). Accordingly, since the use examples of von Deyn reference chlorine substituted compounds, one of ordinary skill in the art could not reasonably expect the respective data of von Deyn US to mirror results which would be obtained with applicants' compounds.

Additionally, as explained by Silverman, replacing one substituent by another may affect any one or more of the structure, the receptor interaction, the pharmacokinetics and the metabolism and, thus, alter the property profile. *Cf.*, Witschel Declaration IV, ¶6. The compounds addressed in the use examples of von Deyn US carry oxazolyl or thiazolyl rings which are aromatic substituents in the position of Z rather than the non-aromatic 4,5-dihydroisoxazol-3-yl group which takes the corresponding position in applicants' compounds, as well as in compounds 5.4 and 5.5 of von Deyn. In light of Silverman's explanations, this change in the nature of the Z substituent also can be expected to affect any one or more of the structure, the receptor interaction, the pharmacokinetics and the metabolism of the compound, and one of ordinary skill, therefore, could not expect that the data shown in the use examples of von Deyn US mirror results which would be obtained with applicants' compounds, or even those which are obtained with von Deyn's compounds 5.4 and 5.5.

It is also noted, in this context, that the compounds which are addressed in the use examples of von Deyn are among those enumerated in von Deyn's Table 1 rather than Table 5. Accordingly, the use examples of von Deyn further show that the compounds which are set forth in von Deyn's Table 1 cannot be disregarded in a proper determination of the scope and content of the reference especially since Table 1 lists numerous compounds which are structurally closely related in that they also carry an oxazolyl or thiazolyl group in Z position. Moreover, and with a view to the 10 compounds enumerated in von Deyn's Table 5, the compounds addressed in the use examples of von Deyn are structurally by far more closely related to Examples Nos. 5.1-5.2, 5.7, and 5.9-5.10 than to Examples Nos. 5.4 and 5.5, or to applicants' compounds.

Regarding the Obviousness-Type Double Patenting Rejection:

According to long-standing holdings of the Courts, a double patenting rejection of the obviousness type is analogous to a failure to meet the non-obviousness requirement of 35 U.S.C. §103 except that the reference underlying the double patenting rejection is not considered prior art. Therefore, any analysis employed in an obviousness-type double patenting rejection parallels

the foregoing guidelines for analysis of a 35 U.S.C. §103 obviousness determination. *In re Braithwaite*, 379 F.2d 594 (CCPA 1967); *In re Longi*, 759 F.2d 887 (Fed. Cir. 1985); *In re Braat*, 837 F.2d 589 (Fed. Cir. 1991). Like the analysis under §103, an analysis of obviousness-type double patenting entails determining, inter alia, whether one of ordinary skill in the art would have had reason or motivation to make the necessary modification(s) of the asserted claims with a reasonable expectation of success. *See Otsuka Pharmaceutical Co., Ltd. v. Sandoz, Inc.*, 678 F. 3d 1280, 1298 (Fed. Cir. 2012). The determination underlying the obviousness-type double patenting analysis is made with a view to the claimed invention rather than the disclosure of the reference underlying the obviousness-type double patenting rejection; however, the specification can be used as a dictionary to learn the meaning of a term in the earlier claim. *In re Boylan*, 392 F.2d 1017 (CCPA 1968). Also, those portions of the specification which provide support for the earlier claims may be examined and considered when assessing whether a later claim defines an obvious variation of an earlier claimed invention. *In re Vogel*, 422 F.2d 438 (CCPA 1970).

Claims 1-8 of von Deyn US, taken in view of the pertinent parts of the specification, are insufficient to support a finding of obviousness under the doctrine for lack of the reason or motivation to make the modification(s) of the asserted claims which are necessary to arrive at the subject matter of applicants' claims, and for the reasons discussed above.

Claims 1-4 and 8 of von Deyn US are drawn to the compounds *per se*. In all instances, the definition of Z broadly refers to "a 5- or 6-membered heterocyclic saturated or unsaturated radical which has one to three hetero atoms selected from the group consisting of oxygen, sulfur and nitrogen and which is unsubstituted or substituted by …" Von Deyn US, col. 30, ll. 1-31 (claim 1); col. 32, ll. 20-31 (claim 8). Claims 2-4 depend on claim 1 and incorporate the definition of Z by reference. Von Deyn US, col. 31, l. 4 (claim 2); col. 31, ll. 17-18 (claim 3); col. 31, ll. 19-20 (claim 4). The meaning of the term "a 5- or 6-membered heterocyclic saturated or unsaturated radical which has one to three hetero atoms selected from the group consisting of oxygen, sulfur and nitrogen" is addressed in the specification as follows:

> Z is, for example,
>
> a saturated or unsaturated 5- or 6-membered heterocyclic radical which has one to three hetero atoms selected from the group consisting of oxygen, sulfur and nitrogen, for example

a five-membered heteroaromatic radical such as 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyrrolyl, 3-pyrrolyl, 3-isoxazolyl, 4-isoxazolyl, 5-isoxazolyl, 3-isothiazolyl, 4-isothiazolyl, 5-isothiazolyl, 3-pyrazolyl, 4-pyrazolyl, 5-pyrazolyl, 2-oxazolyl, 4-oxazolyl, 5-oxazolyl, 2-thiazolyl, 4-thiazolyl, 5-thiazolyl, 2-imidazolyl, 4-imidazolyl, 1,2,4-oxadiazol-3-yl, 1,2,4-oxadiazol-5-yl, 1,3,4-oxadiazol-2-yl, 1,2,3-oxadiazol-4-yl, 1,2,3-oxadiazol-5-yl, 1,2,5-oxadiazol-3-yl, 1,2,4-thiadiazol-3-yl, 1,2,4-thiadiazol-5-yl, 1,3,4-thiadiazol-2-yl, 1,2,3-thiadiazol-4-yl, 1,2,3-thiadiazol-5-yl, 1,2,5-thiadiazol-3-yl, 1,2,4-triazol-3-yl, 1,3,4-triazol-2-yl, 1,2,3-triazol-4-yl, 1,2,3-triazol-5-yl, 1,2,4-triazol-5-yl, tetrazol-5-yl, in particular 2-thiazolyl and 3-isoxazolyl;

a six-membered heteroaromatic radical such as 2-pyridinyl, 3-pyridinyl, 4-pyridinyl, 3-pyridazinyl, 4-pyridazinyl, 2-pyrimidinyl, 4-pyrimidinyl, 5-pyrimidinyl, 2-pyrazinyl, 1,3,5-triazin-2-yl, 1,2,4-triazin-5-yl and 1,2,4-triazin-3-yl, 1,2,4-triazin-6-yl, 1,2,4,5-tetrazin-3-yl;

a saturated or partially unsaturated 5- to 6-membered heterocycle which has one to three nitrogen atoms and/or one or two oxygen or sulfur atom(s) such as 2-tetrahydrofuranyl, 3-tetrahydrofuranyl, 2-tetrahydrothienyl, 3-tetrahydrothienyl, tetrahydrothiopyran-2-yl, tetrahydrothiopyran-3-yl, tetrahydrothiopyran-4-yl, 1,3-dithiolan-2-yl, 1,3-dithiolan-4-yl, 1-3-dithian-2-yl, 1,3-dithian-4-yl, 5,6-dihydro-4H-1,3-thiazin-2-yl, 1,3-oxathiolan-2-yl, 1,3-oxathian-2-yl, 1-pyrrolidinyl, 2-pyrrolidinyl, 3-pyrrolidinyl, 3-isoxazolidinyl, 4-isoxazolidinyl, 5-isoxazolidinyl, 3-isothiazolidinyl, 4-isothiazolidinyl, 5-isothiazolidinyl, 3-pyrazolidinyl, 4-pyrazolidinyl, 5-pyrazolidinyl, 2-oxazolidinyl, 4-oxazolidinyl, 5-oxazolidinyl, 2-thiazolidinyl, 4-thiazolidinyl, 5-thiazolidinyl, 2-imidazolidinyl, 4-imidazolidinyl, 1,2,4-oxadiazolidin-3-yl, 1,2,4-oxadiazolidin-5-yl, 1,2,4-thiadiazolidin-3-yl, 1,2,4-thiadiazolidin-5-yl, 1,3,4-oxadiazolidin-2-yl, 1,3,4-thiadiazolidin-2-yl, 1,3,4-triazolidin-2-yl, 2,3-dihydrofur-2-yl, 2,3-dihydrofur-3-yl, 2,4-dihydrofur-2-yl, 2,4-dihydrofur-3-yl, 2,3-dihydrothien-2-yl, 2,3-dihydrothien-3-yl, 2,4-dihydrothien-2-yl, 2,4-dihydrothien-3-yl, 2,3-pyrrolin-2-yl, 2,3-pyrrolin-3-yl, 2,4-pyrrolin-2-yl, 2,4-pyrrolin-3-yl, 2,3-isoxazolin-3-yl, 3,4-isoxazolin-3-yl, 4,5-isoxazolin-3-yl, 2,3-isoxazolin-4-yl, 3,4-isoxazolin-4-yl, 4,5-isoxazolin-4-yl, 2,3-isoxazolin-5-yl, 3,4-isoxazolin-5-yl, 4,5-isoxazolin-5-yl, 2,3-isothiazolin-3-yl, 3,4-isothiazolin-3-yl, 4,5-isothiazolin-3-yl, 2,3-isothiazolin-4-yl, 3,4-isothiazolin-4-yl, 4,5-isothiazolin-4-yl, 2,3-isothiazolin-5-yl, 3,4-isothiazolin-5-yl, 4,5-isothiazolin-5-yl, 2,3-dihydropyrazol-1-yl, 2,3-dihydropyrazol-2-yl, 2,3-dihydropyrazol-3-yl, 2,3-dihydropyrazol-4-yl, 2,3-dihydropyrazol-5-yl, 3,4-dihydropyrazol-1-yl, 3,4-dihydropyrazol-3-yl, 3,4-dihydropyrazol-4-yl, 3,4-dihydropyrazol-5-yl, 4,5-dihydropyrazol-1-yl, 4,5-dihydropyrazol-3-yl, 4,5-dihydropyrazol-4-yl, 4,5-dihydropyrazol-5-yl, 2,3-dihydrooxazol-2-yl, 2,3-dihydrooxazol-3-yl, 2,3-

> dihydrooxazol-4-yl, 2,3-dihydrooxazol-5-yl, 4,5-dihydrooxazol-2-yl, 4,5-dihydrooxazol-4-yl, 4,5-dihydrooxazol-5-yl, 1,3-dioxolan-2-yl, 1,3-dioxolan-4-yl, 1,3-dioxan-5-yl, 1,4-dioxan-2-yl, 2-piperidinyl, 3-piperidinyl, 4-piperidinyl, 3-tetrahydropyridazinyl, 4-tetrahydropyridazinyl, 2-tetrahydropyrimidinyl, 4-tetrahydropyrimidinyl, 5-tetrahydropyrimidinyl, 2-tetrahydropyrazinyl, 1,3,5-tetrahydro-triazin-2-yl and 1,2,4-tetrahydrotriazin-3-yl, in particular 2-tetrahydrofuranyl, 1,3-dioxolan-2-yl and 1,3-dioxan-2-yl,

Von Deyn US, cols. 14-15, ll. 34-34. Additionally included are

> Benzo-fused 5- or 6-membered heteroaromatic radicals are, for example, benzofuranyl, benzothienyl, indolyl, benzoxazolyl, benzoisoxazolyl, benzothiazolyl, benzoisothiazolyl, benzopyrazolyl, indazolyl, 1,2,3-benzothiadiazolyl, 2,1,3-benzothiadiazolyl, benzotriazolyl, benzofuroxanyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl or phthalazinyl.

Von Deyn US, col. 16, ll. 10-16. Von Deyn does not express any preferences within the afore-reproduced enumeration of suitable heterocycles and also fails to provide any information as to which of the types of heterocycles, or specific embodiments thereof, may be of particular interest. Thus, when used as a dictionary to learn the meaning of the term "a 5- or 6-membered heterocyclic saturated or unsaturated radical which has one to three hetero atoms selected from the group consisting of oxygen, sulfur and nitrogen," the enumeration of exemplary types and embodiments of heterocyclic groups does not aid in selecting any particular type of heterocycle or specific embodiments thereof.

In addition to the unqualified enumeration of exemplary types and embodiments of the 5- or 6-membered heterocyclic radicals, von Deyn lists "[e]xamples of particularly preferred compounds … in Table 1[.]" Von Deyn US, col. 16, ll. 16-18. In the vast majority of these 188 particularly preferred compounds Z is an aromatic 5- or 6-membered ring (optionally substituted and/or benzo-fused), and/or M is chlorine. One of these 188 compounds carries a *5-cyano*-4,5-dihydroisoxazol-3-yl radical in Z position with M being chlorine. Von Deyn US, col. 18, ll. 17-18, No. 1.79. The examples of particularly preferred compounds which are listed in Table 1 of von Deyn, therefore, also fail to motivate one of ordinary skill in the art to make the specific structural modifications which are necessary to arrive at applicants' compounds.

Von Deyn illustrates the herbicidal properties of Examples Nos. 1.28 and 1.98 in the use examples. Both examples are representative of the vast majority of the particularly preferred compounds in Table 1, i.e., Z is an aromatic 5-membered heterocycle (oxazolyl or thiazolyl), and

M is chlorine. Von Deyn US, col. 24, ll. 1-42. Additionally, von Deyn illustrates the synthesis of the compounds in the preparation examples by describing the synthesis of Example No. 1.28. Von Deyn US, col. 29, ll. 1-24. Following this description and preceding Table 5, von Deyn states: "The compound shown in the table which follows is obtained by a similar method[.]" Von Deyn US, col. 29, ll. 25-26. All compounds enumerated in Table 5 carry chlorine in M position and, with the exception of compounds 5.4 and 5.5, carry as Z substituent an aromatic 5-membered heterocycle (oxazolyl, isoxazolyl, thienyl or thiazolyl). In contrast to the compounds enumerated in Table 1, the compounds set forth in Table 5 are not specifically highlighted as representing preferred embodiments. As such, the additional compounds which are listed in von Deyn's Table 5 cannot be viewed in isolation or without due consideration of the exemplary preferred compounds listed in Table 1 of the reference. Under those circumstances, however, the additional compounds which are listed in von Deyn's Table 5 also fail to motivate one of ordinary skill in the art to make the specific structural modifications which are necessary to arrive at applicants' compounds.

CONCLUSION

The foregoing shows that the subject matter of applicants' claims is patentable under the pertinent provisions of the statute, and that the claims are in good condition for allowance. In order to facilitate the resolution of any remaining issues or questions presented by this paper, applicants respectfully request that the Examiner directly contact the undersigned by phone to further the discussion. Favorable action is solicited

Respectfully submitted,

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